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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/549,721	09/16/2005	Bror Nyman	1034281-000027	1371

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EXAMINER	
DRODGE, JOSEPH W	

ART UNIT	PAPER NUMBER
1797	

NOTIFICATION DATE	DELIVERY MODE
06/04/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ADIPFDD@bipc.com

Office Action Summary	Application No.	Applicant(s)	
	10/549,721	NYMAN ET AL.	
	Examiner	Art Unit	
	Joseph W. Drodge	1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *4/14/2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 10-29 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over ANY of claims 1-24 of Nyman et al patent 7,517,461; claims 1-27 of Nyman et al patent 7,465,402 or claims 1-23 of Nyman et al patent 7,390,420 taken in view of Vancas patent 5,558,780 and Nyman et al patent 6,083,400. These are provisional obviousness-type double patenting rejections. Each of Nyman et al patents '461, '402 and '420 claims method and apparatus for separation of aqueous and organic solutions in separation sections defined by front and rear space, sidewalls and longitudinal axes, with outward flow to the rear space, damming of dispersion flow, vertical flow and reversing by means of reversing or reverting elements having reversal channel between plate-like components. Vancas teaches the obviousness of providing a solid partition along the longitudinal axis of the separation vessel to separate an outward flow and return flow, together with Nyman et al '400 who teaches to recirculate a portion of the organic and aqueous solutions separated at the end of the separation vessel to the feed mixing section , and to have several picket fences along the outward flow portion of the vessel. Vancas also teaches the recited headboxes for the separated aqueous and organic solutions to enhance solution collection.

Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1, "in the return flow field" in section (g) lacks antecedent basis; this term could be introduced in part b) of the claim.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

ALLOWABLE SUBJECT MATTER

Claims 1-9 would be allowable if rewritten or amended to overcome the double patenting rejection(s), under 35 U.S.C. 112, 1ST Paragraph, set forth in this Office action.

The following is an examiner's statement of reasons for allowance: Claims 1-9 would remain distinguished in view of returning each of dispersion and aqueous and organic phases by means of reversing elements with plate-like components defining reversing channels. Both Nyman 6,083,400 and Vancas patent 5,558,780 provide return flow of separated organic and

aqueous phases, however not with such reversing elements which additionally provide return flow of dispersion.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 10 and 13-29 are rejected under 35 U.S.C. 102(b) as being anticipated by newly cited Vancas patent 5,558,780 in view of Nyman patent 6,083,400. Vancas discloses equipment comprising, feed end 6' or 2, sidewalls 3 and 5, bottom 1, end walls 2 and 2' or 40, headboxes of separated solutions (launders 20 and 40), solid partition wall 4, and reversing element (elements 60 that may be in plural --- column 4, line 66) and/or reverser plates/fences 70 that may be situated at different heights (column 5, lines 14-18 state that these may be canted with respect to each other and thus extend to different heights with respect to each other and/or relative to reversing elements 60. Also the floor 1 of the separating equipment 1 may be situated at a varying pitch, hence at different elevations, providing additional logic therefor the elements 60 and 70 optionally being at varying, different heights . The elements 60 and 70 define channels therebetween the plurality of such elements. At least elements 70 extend transversely from sidewall of the settler to the end of the solid partition 4. The instant apparatus claims do not require any particular orientation or configuration of the claimed channel.

Longitudinally extending partition 4 divides the separation settler into an outward flow field 1 or 10 and corresponding return flow field 10 or 1, with upstream portion of either outward flow field or return flow field arbitrarily defining a 'mixing section' with downstream portion

thereof defining a separation section. The claims differ in explicit requirement for mixing and separation section and applicability of the apparatus to metal recovery. Vancas discloses the apparatus directed to any of "many different areas of industry that require separation of heterogeneous mixtures, that may be aqueous and oil or organic phases (column 1, lines 7-16), while Nyman '400 teaches a recirculating longitudinal separator to separate aqueous from organic solutions in metal recovery or other industries (Abstract, figure 1 and column 1, lines 9-30). Nyman '400 also discloses distinct mixing sections 3 and 4 (column 1, lines 32-45 and column 2, lines 48-55). It would have been obvious to the skilled artisan to have employed such mixing sections in the Vancas apparatus to enhance contact between the phases so as to improve desired extraction of a desired component into a single separated phase (organic or aqueous) of the flowing liquid mixture.

With respect to various dependent claims , column 5, lines 10-18 state that there may be more than 2 "distribution fences", hence any 2 of these may be deemed the claimed reverser plates and other(s) may be deemed the claimed "picket fences", by definition, such "fences" have slotted spaces between rungs of fence at all different relative heights from bottom to top of the fences. Teaching of these being canted, constitutes these being at different angles, inclinations and extending to different heights. The top of these plates/fences necessarily have overflow edges

Applicant's arguments filed on April 14, 2009 have been fully considered but they are not persuasive. It is argued that Vancas does not disclose any mixing section. It is submitted that Nyman '400 provides the missing teaching of such explicit mixing section combined with separation of aqueous and organic phases in a longitudinal settler. Argument continues that

Vancas lacks reversing plates with features of channels being between 1st and 2nd reverser plates, baffles extending transversely from apparatus sidewall to partition, and baffles being at different heights. It is submitted that the claims do not recite any particular orientation or configuration of the channel(s); baffles 70 are clearly extending from sidewall to partition, and features 60 and 70 are necessarily at different heights due to both canting of the features and varying slope of sidewall bottom.

It is argued that Vancas does not disclose overflow of separation solution, or flow of extraction mixture under the 1st plate into the reverser channel. It is recognized that all of such arguments are not commensurate with the structural feature requirements of the apparatus claims. The claims do not require overflow or flow above and/or below the elements.

The remarks at page 15 express doubt as to whether the baffles of Vancas successfully achieve their goal of reducing turbulence. Such reasoning amounts to mere speculation and is not determinative of apparatus claim patentability.

With respect to argument directed against applying of the distribution fences 70 of Vancas against the claims, it is speculated that these elements are mounted at different angles relative to sidewall, are at an excessive distance from each other and are mounted to the bottom of the apparatus. Even if one or more of these speculations is correct, none of such features are precluded by the structural limitations of the claims.

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Joseph Drodge at his direct government telephone number of 571-272-1140. The examiner can normally be reached on Monday-Friday from approximately 8:30 AM to 12:30 PM and 2:00 PM to 6:00 PM.

Additionally, the examiner's supervisor, Duane Smith, of Technology Center Unit 1797, can reached at 571-272-1166.

The formal facsimile phone number, for official, formal communications, for the examining group where this application is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR, and through Private PAIR only for unpublished applications. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JWD
6/1/2009
/Joseph W. Drodge/
Primary Examiner, Art Unit 1797